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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,171	10/23/2003	Edgar A. O'Rear III	5820.643	8356
30589 7590 06/13/2007 DUNLAP, CODDING & ROGERS P.C. PO BOX 16370 OKLAHOMA CITY, OK 73113			EXAMINER AHMED, SHEEBA	
			ART UNIT 1773	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,171	<b>Applicant(s)</b> O'REAR	
	<b>Examiner</b> Sheeba Ahmed	<b>Art Unit</b> 1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2007 and 23 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 30, 2007 has been entered.

### ***Response to Amendments***

2. Amendments to claim 1 have been entered in the above-identified application.  
**Claims 1-8 are pending.**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diehl et al. (US 5,623,015).

Diehl et al. disclose a latex binder composition comprised of vinyl-substituted aromatic monomers such as styrene (Column 2, lines 26-43) a free radical initiator such

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as sodium persulfate (Column 4, lines 7-10) and an anionic surfactant such as sodium dodecyl sulfate (Column 5, lines 33-40). The polymerization is generally carried out at a temperature of 55 to 95°C (Column 5, lines 61-62). The latex binder composition may be applied to non-woven cellulose substrate such as paper and other substrates containing polyester, nylon or acrylates (Column 6, lines 29-35). Accordingly, it would have been obvious to one having ordinary skill in the art to pick any of the vinyl-substituted aromatic monomers, free radical initiators and surfactants listed given that all are taught by Diehl et al. as equivalents of each other. With regards to the property that the substrate having the admicellar hydrophobic coating thereon has an air permeability substantially the same as the air permeability of an uncoated substrate, the Examiner takes the position that such a limitation is inherently met by the structure taught in the above reference given that the chemical composition of the coating and the structure of the fabric in the instantly claimed invention and those of the reference are identical.

4. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds et al. (US 5,919,716).

Reynolds et al. disclose self-crosslinking polymer compositions useful as coatings for non-woven fabrics (Column 1, lines 10-15) and comprising a vinyl polymer component such a styrenic monomer (Column 3, lines 1-10 and Column 4, lines 27-29), a crosslinker such as sodium persulfate (Column 3, lines 24-26 and Example 1) and a surfactant such as sodium dodecyl sulfate (Column 5, lines 20-30). The reaction is

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carried out at a temperature of 20 to 90°C (Column 5, lines 50-55). Example 1 indicates that the reaction can be carried out a temperature of 60°C for one hour. Substrates that may be coated with the self-crosslinkable polymeric composition include polyesters, PP, PE and cellulose substrates (Column 10, lines 23-28). Accordingly, it would have been obvious to one having ordinary skill in the art to pick any of the vinyl-substituted aromatic monomers, free radical initiators and surfactants listed given that all are taught by Reynolds et al. as equivalents of each other. With regards to the property that the substrate having the admicellar hydrophobic coating thereon has an air permeability substantially the same as the air permeability of an uncoated substrate, the Examiner takes the position that such a limitation is inherently met by the structure taught in the above reference given that the chemical composition of the coating and the structure of the fabric in the instantly claimed invention and those of the reference are identical.

5. Claim 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds et al. (US 5,919,716) in view of Pickelman et al. (US 4,582,663).

Reynolds et al., as discussed above, do not disclose that the initiator may be AIBN, i.e., azobisisobutyronitrile.

However, Pickelman et al. teach that persulfates and azo compounds such as AIBN and sodium persulfate are known equivalents as conventional polymerization initiators (Column 5, lines 3-10) and therefore, because these two initiators were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute AIBN for sodium persulfate.

***Response to Arguments***

6. Applicant's arguments filed on March 30, 2007 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 1-5, 7, and 8 under 35 U.S.C. 103(a) as being unpatentable over Diehl et al. (US 5,623,015) and the rejection of claims 1-5, 7, and 8 under 35 U.S.C. 103(a) as being unpatentable over Raynolds et al. (US 5,919,716) and submit that there is no teaching or suggestion in Diehl et al. or Raynolds et al. of Applicants' substrate comprising a plurality of individual fibers having at least one surface, wherein at least one surface of the plurality of individual fibers has an admicellar hydrophobic polymer coating thereon and furthermore wherein the resulting substrate also has an air permeability substantially the same as the uncoated substrate. The Applicants argue that the above references teach the method of forming a polymer in solution and thereafter applying it to the fabric which results in the polymer filling in the voids between the threads of the fabric as well as encasing the threads -- a property, the Applicants argue, that does not occur utilizing the Applicants' claimed methodology.

First, the Examiner would like to point out that the Diehl and Raynolds reference do in fact teach fabrics (see Col. 6, lines 38-40 and Col. 10, lines 23-28, respectively) and thus must inherently have a plurality of individual fibers. Second, the claims, as recited now, do not preclude the polymer from filling in the voids between the threads of the fabric as well as encasing the threads.


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**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (571)272-1504. The examiner can normally be reached on Mondays-Thursdays from 8am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sheeba Ahmed  
Art Unit 1773  
June 7, 2007